on bedside or as a day-care procedure. **Methods:** From January 2018 to October 2019, we performed 100 cases of percutaneous needle-directed thrombolysis. Under ultrasonographic (USG) guidance, multiple 26G needles were placed in the thrombosed vein or graft. Cocktail of 5 lakh IU of urokinase and heparin was prepared. Manual injections of 0.2–0.3 ml aliquots of thrombolytic solution were applied to each needle about every 30 s with a 2 ml syringe. **Results:** 86 of the thrombosed dialysis fistula/graft were recanalized within 24 h of the procedure and 14 required the second attempt within 48 h. Technical success was found in all thrombosed fistula/graft; however, technical difficulties were more in radiocephalic fistula due to tortuous course of the vessel and lack of good soft tissue window. **Conclusion:** USG-guided needle directed pulse-spray pharmacomechanical technique is a minimally invasive technique. There is no radiation involved in the procedure, and it effectively reduces the cost of the procedure. Our results showed a high procedural success rate, good patency rate, and no major complications.

OR2.11

Catheter-Directed Thrombolysis for Acute Iliofemoral Deep Vein Thrombosis: Predictors of Outcome

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Objectives: Catheter-directed thrombolysis (CDT) in properly selected cases can result in curing acute symptoms of deep vein thrombosis (DVT) as well as reducing the incidence and severity of postthrombotic syndrome (PTS). The ACCP guidelines 2016 proposed that patients most likely to benefit from CDT are those with iliofemoral DVT (IFDVT), preferably first episode, symptoms less than 14 days, life expectancy more than 1 year, and low risk of bleeding. Other factors influencing the outcome can be the thrombus load and extent, as well as the anatomic location of the thrombotic process. The current study aims at identifying patients who will have a favorable outcome following CDT for acute IFDVT so as to detect predictors of outcome after such intervention. **Methods:** In a prospective, observational cohort study, patients presenting to Ain Shams University Hospitals over 2 years from January 2016to October 2017 suffering from symptoms of acute IFDVT and fulfilling the inclusion criteria were recruited. Twenty patients were recruited, aged 19–64 years; 11 patients were women, and the rest were men. Demographic and medical data were gathered. All patients had duplex scanning of the deep venous system of the affected limb(s) to appreciate the extent of thrombosis and to assess the access site. Regular laboratory investigations were done, including full blood count, kidney function tests, liver function tests, and coagulation profile. Patients were administered therapeutic dose low molecular weight heparin (LMWH) on admission. The procedure was performed in an operating room or interventional suite; the patients were monitored in the intensive care unit (ICU). Ultrasound-guided popliteal or short saphenous vein access was used (prone position). Ascending venography was then performed through the sheath to determine the extent of the thrombus. A multiple side-hole infusion catheter was positioned in the iliofemoral segment. An initial bolus (10–15 mg) of recombinant tissue plasminogen activator (rtPA/alteplase) given via pulse-spray technique. The patient was then transferred to the ICU and continuous infusion for 24 h with rate 1.5–2 mg/h was initiated. Total dose of rtPA was 50 mg/24 h. Further ascending venography was performed at completion of procedure then at 24 h and in three cases at further 36 (1) and 48 h (2), respectively. Assessment of immediate procedural failure was based on the degree of lysis (>50% or < 50%) and 30-day recurrence of DVT. Occurrence of PTS at 6 months was based on the Villalta score. **Results:** Twenty patients were recruited, the mean age was 46.3 years, 11 patients were women, and the rest were men. Endpoints were clearance of the thrombus load in the iliac segment, evident improvement of symptoms and signs, lysis at 48 h, total failure of lysis after the first 24 h, hemorrhage-threatening general condition of the patient, and occurrence of pulmonary embolism. All of our patients had thrombus lysis >50%. We did not find significant difference between patients presenting <7 days or 7–14 days as regards the final lysis grade or severity of PTS after 6 months. Six months postintervention, seven patients were free of PTS, 15 patients had mild-to-moderate PTS, and no correlation was found between the lysis grade and Villalta score at 6 months. No patients had severe PTS. Access through the short saphenous vein had lower rate of clinically relevant nonmajor bleeding. No recurrent venous thromboembolism, postlysis PE, or deaths occurred in our study. We found no significant association between predisposing risk factors (e.g., demographic and medical conditions) and the degree of lysis or severity of PTS. Access via the short saphenous vein had less bleeding complications than popliteal vein in our series. **Conclusion:** In our study, determinants of outcome following CDT for acute IFDVT were (1) dose of thrombolytic agent used, (2) duration of thrombolysis, and (3) thrombus score at the end of the procedure. There is an obvious need for further studies addressing larger number of patients and longer follow-up to identify further determinants of outcome with respect to both acute results and long-term PTS occurrence rates.

OR2.12

Postthrombotic Syndrome in Acute Iliofemoral Deep Vein Thrombosis

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Objectives: Postthrombotic syndrome (PTS) due to chronic venous insufficiency has been shown to affect many patients with a history of proximal iliofemoral deep vein thrombosis (IF-DVT). The current treatment options include catheter-directed thrombolysis (CDT), recommended by the National Institute of Clinical Excellence, and/or alternatively percutaneous mechanical thrombectomy (PMT) to reduce the incidence of PTS and associated potential poor quality of life (QoL). We set out to identify the rate and severity of PTS and explore the QoL among IF-DVT patients treated with PMT. **Methods:** A retrospective review of IF-DVT patients treated with PMT was undertaken in a single tertiary center between January 2012 and 2017. The rate of PTS and QoL posttreatment was evaluated (follow-up range: 12–70 months, mean 32.3 months). Patients were invited to complete follow-up questionnaires (Villalta score and VEINES QoL/Sym). **Results:** Of 115 patients with IF-DVT, 42 were excluded (deceased, no intervention done, or only had CDT). 30

questionnaire replies (out of 73 PMT patients) were included in this study (41% return rate). 24/29 patients (83%) suffered from no or mild PTS symptoms, while the overall mean VEINES Sym/QoL scores were 75% and 76%, respectively. Direct correlation between the poorer PTS and VEINES Sym/QoL scores was observed. No statistically significant difference was seen between patients who were treated with/without stenting and compression stockings, neither their body mass index nor gender. **Conclusion:** There is a positive outcome in the symptoms of PTS and QoL among IF-DVT patients treated with PMT at long-term follow-up. Hence, PMT should be considered in this cohort. Improved patient selection factors targeting the most at-risk group should be further investigated.

OR3.1

Six-and-Twelve Score for Transarterial Chemoembolization: Is It Applicable for Hepatitis C Virus-Positive Patients with Hepatocellular Carcinoma?

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Objectives: A new scoring system named "six-and-twelve score" was presented by Wang *et al*. for the prediction of the overall survival in hepatocellular carcinoma (HCC) patients mostly due to hepatitis B virus (HBV) treated with transarterial chemoembolization (TACE). This scoring system is calculated by the sum of the tumor size and number. It divides the patients into three groups, G1 ≤6, G2 >6 but ≤12, and G3 >12 with a median overall survival of 49.1, 32.0, and 15.8 months, respectively. Our aim is to assess the prognostic value of this scoring system in HCC patients due to hepatitis C virus (HCV) treated with TACE in our center. **Methods:** A total of 79 HCV-positive patients with HCC treated with TACE were included in this study, with the same inclusion and exclusion criteria of the six-and-twelve score study. According to this scoring system, we divided our patients into three groups; G1 (24 patients), G2 (31 patients), and G3 (24 patients). We followed up our patients to assess the overall survival rate. **Results:** The mean overall survival rate at 3 years was 32 months for G1, 21 months for G2, and 10 months for G3. **Conclusion:** Our data suggest that six-and-twelve score could not be applicable for the prediction of overall survival in HCV patients with HCC treated with TACE. Further studies are recommended to validate this scoring system in the prediction of survival in HCC patients with HCV.

OR3.2

Safety and Efficacy of Microwave Ablation of Stage T1 Renal Cell Carcinoma

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Objectives: To evaluate the safety and efficacy of microwave ablation (MWA) of stage 1 renal cell carcinoma (RCC). **Methods:** We retrospectively reviewed the medical records of 29 patients with 31 tumors who underwent MWA for stage 1 RCC between 2008 and2018 in our institution. Patient demographics, tumor characteristics, technical success defined as the absence of residual tumor within 3 months of procedure, and complications were reported. The recurrence-free, cancer-specific, and overall survival rates were analyzed. A univariate analysis was performed to identify any potential predictors of complications, local recurrence, or survival. **Results:** Mean age of the patients was 64 ± 10.6 years, and 34.5% of the patients had chronic kidney disease stage 3 at baseline. The median Charlson comorbidity index was 5 (range: 5–12). The median tumor size was 2.7 cm (range: 1.0–6.1) with 18 (58.1%) posterior tumors. Stage T1a tumors were seen in 93.5% of patients. Median number of probes was 1 (range: 1–3), and biopsy was performed in 22 (72.4%) tumors. Technical success rate was 93.1%. Minor and major complications were seen in 5 (17.2%) and 1 (3.4%) patients, respectively. No local recurrence was reported. The overall survival was 100%, 84.6%, and 84.6% at 1, 3, and 5 years. Cancer-specific survival was 100% at 5 years. There were predictors for complications or survival outcomes. **Conclusion:** Percutaneous MWA is a safe and efficacious thermal ablation modality for the treatment of stage 1 RCC with acceptable outcomes.

OR3.3

Major Complications after Conventional Chemoembolization for Hepatocellular Carcinoma in the Era of C-Arm Computed Tomography

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Objectives: To evaluate the prevalence and contents of major complications after conventional trans arterial cehmoembolization (cTACE) for hepatocellular carcinoma (HCC) in the era of cone-beam computed tomography (CBCT) depending on tumor stages. **Methods:** We retrospectively reviewed electronic medical records of 822 patients who underwent cTACE for HCC between 2010 and 2011. Among them, 556 patients underwent cTACE under the guidance of CBCT. The prevalence and contents of major complications after initial cTACE were collected and the influence of tumor stage was investigated. **Results:** Major complications developed in 39 (4.7%) of 822 patients. Their prevalence in BCLC 0, A, B, and C stages was 0% (0/160), 2.9% (8/274), 1.2% (2/164), and 12.9% (29/224), respectively. In BCLC A stage, major complications developed in 8 patients (4 liver abscess, 1 septicemia with infarction, 1 gallbladder perforation, 1 variceal bleeding, and 1 spontaneous bacterial peritonitis). Four patients had predisposing factors of bilioenteric anastomosis (n = 2), previous history of variceal